



US Army Corps  
of Engineers  
Portland District

# PUBLIC NOTICE

## for PERMIT APPLICATION

Issue Date: October 18, 2007

Expiration Date: November 19, 2007

Corps of Engineers Action ID: NWP-2005-399

Oregon Department of State Lands Number: N/A

### 30 Day Notice

Interested parties are hereby notified that an application has been received for a Department of the Army permit for certain work in waters of the United States, as described below and shown on the attached plan.

**Comments:** Comments on the described work should reference the U.S. Army Corps of Engineers number shown above and should reach this office no later than the above expiration date of this Public Notice to become part of the record and be considered in the decision. Comments should be mailed to the following address:

U.S. Army Corps of Engineers  
ATTN: CENWP-OD-GP (Ms. Karla G. Ellis)  
P.O. Box 2946  
Portland, Oregon 97208-2946

**Applicant:** Bradwood Landing, LLC

**Location:** The project would involve terminal construction and pipeline construction in both Oregon and Washington. The terminal is located at the area known as Bradwood Landing at Columbia River Mile 38.5, Sections 9 and 15, Township 8 North, Ranges 4 and 6 West, near Wauna, Clatsop County, Oregon.

The Oregon portion of the pipeline would extend 18.9 miles from the Terminal site through Clatsop and Columbia Counties to Port Westward where it would cross the Columbia River at River Mile 54.

The Washington portion of the pipeline would extend 17.4 miles from the Columbia River crossing at River Mile 54 to the Washington side, where it would surface near Germany Creek. It will then extend in an easterly direction where it would connect to the existing KB Pipeline near Interstate 5.

**Project Description:** The project would provide a new source of natural gas to the Pacific Northwest by importing liquefied natural gas (LNG). Bradwood Landing proposes to provide up to 1.3 billion cubic feet per day of natural gas to the region through interconnects at two industrial facilities, an intrastate pipeline, and an interstate pipeline. Approximately 125 ships per year would enter and travel along the Columbia River to deliver cargo to the LNG terminal.

The proposed site is located at the former townsite of Bradwood in Clatsop County, Oregon and would permanently occupy about 40 acres of land within a 411-acre site controlled by Bradwood Landing. The site is an old industrial and dredge disposal site between the Hunt Creek estuary and the Columbia River. The LNG terminal facilities would include:

- A single ship berth capable of receiving and unloading LNG ships with cargo capacities ranging from 100,000 to 220,000 cubic meters (m<sup>3</sup>);
- two 160,000 m<sup>3</sup> insulated LNG storage tanks (Bradwood Landing has reserved space for a third LNG tank; however, only two tanks are proposed to be constructed at this time);
- vapor handling system and vaporization equipment capable of re-gasifying the LNG for delivery into the natural gas sendout pipeline; and
- piping, ancillary buildings, safety systems, and other support facilities (to include a 1.6 mile long electric transmission line, improvements to Clifton Road, and development of an employee parking area).

As part of improvements to the site, a new bridge will be constructed across Hunt Creek. The bridge design calls for using pre-cast concrete sections. The new bridge will have no in-water supports and no impacts to waters of the U.S.

A groundwater well would be installed at the LNG terminal site to supply water during construction, operation and general purposes. Water would also be appropriated from the Columbia River during construction for ground improvement, and hydrostatic testing of the tanks. During operation, river water would be withdrawn for weekly testing of the fire suppression system. All permanent and temporary surface water intakes that withdraw water from the Columbia River would be screened in accordance with the National Marine Fisheries Service (NMFS) and Oregon Department of Fish and Wildlife (ODFW) requirements to minimize impacts on aquatic resources. In addition, ballast and engine cooling water would be taken on during LNG ship offloading operations.

Bradwood Landing also proposes to develop a 36.3 mile long natural gas pipeline. The natural gas pipeline facilities would include:

- a 36.3 mile-long, underground, high-pressure steel sendout pipeline consisting of approximately 18.9 miles of 36-inch diameter pipeline in Clatsop and Columbia Counties, Oregon and 17.4 miles of 30-inch-diameter pipeline in Columbia County, Oregon and Cowlitz County, Washington; and
- associated pipeline support facilities, including five meter and regulation stations, four interconnects, two pig launchers, and two pig receivers.

The pipeline would cross 66 waterbodies in Oregon and 29 in Washington (waterbodies include ditches, sloughs, tributaries, and streams). To minimize impacts to fish, the majority of the stream/river crossings would be bored or horizontally directionally drilled (HDD) rather than open trenched. Water would be withdrawn from the Columbia River for hydrostatic testing of the pipeline.

#### IMPACTS TO WETLANDS AND WATERWAYS:

Oregon- In Oregon, temporary impacts to wetlands and waterways include up to 1.5 acres at the terminal and 75.64 acres along the pipeline. Bradwood Landing proposes approximately 13 acres of permanent wetland and waterway fill in Oregon.

The permanent terminal impacts include 1) fill of a 5.05 acre log pond under tidal influence with open water and emergent wetland habitat that is accessible to fish; 2) fill of 7.60 acres of additional tidal wetlands that are a mix of forested, scrub-shrub, and emergent habitat; 3) fill of

about 0.69 acres of nontidal wetland; and 4) fill of about 0.37 acres of open water in the Columbia River for pilings for pier construction.

In addition, there would be dredging of approximately 46 acres (approximately 700,000 cubic yards of sediment) to create the proposed ship maneuvering area (turning basin) in the Columbia River. Up to 400,000 cubic yards of this material would be used to prepare the site for Terminal construction and raise the ground level by roughly 5 feet. Up to 330,000 cubic yards of material is proposed for in-water disposal at a location known as the 'Sand Pit' in Wahkiakum County on the west end of Puget Island. Additionally, up to 20,000 cubic yards of material would remain in an upland settling basin for future use. Dredging would be repeated on a 2 to 8-year cycle as needed to maintain adequate depth for ship maneuvering. It is expected that approximately 39,000 cubic yards of material would be dredged every 2 to 4 years. A disposal location for that material has not been provided.

Washington- In Washington, temporary impacts to wetlands and waterways along the pipeline are estimated to be 4.8 acres and less than 0.25 acres will be permanently filled.

#### MITIGATION FOR IMPACTS TO WETLANDS AND WATERWAYS:

Bradwood Landing's proposed compensatory mitigation sites for wetland impacts would occur at Svensen Island (Oregon), located in the lower Columbia River estuary, and Delameter Creek (Washington). A third compensatory mitigation site for terrestrial habitat impacts will be situated at Peterson Point in Oregon. Bradwood is also establishing protective conservation easements on approximately 62 acres of the Hunt Creek estuary at Bradwood and on approximately 170 acres of shallow water pocket estuary habitat at Svensen Island as compensation for impacts to "other waters".

Compensatory mitigation for unavoidable impacts is designed to exceed existing mitigation standards. Permanent impacts to wetlands would be mitigated by restoring habitat with similar ecological function. Mitigation would occur in areas substantially larger than that lost to permanent impacts, and would be restored to a higher level of ecosystem function. Bradwood is proposing more than four acres of tidal restoration and wetland enhancement for each one acre of wetland impacted by the project.

If a permit is issued, the Corps will determine what is appropriate and practicable compensatory mitigation. The amount of compensatory mitigation required shall be commensurate with the anticipated impacts of the project.

**NOTE:** Overall, the project would permanently impact approximately 14 acres of waters of the United States.

**Purpose:** The purpose of the project is to provide natural gas to residential and industrial customers in the Pacific Northwest.

**Drawing(s):** Fifteen, Labeled NWP-2005-399

**Additional Information:** Additional information may be obtained from Ms. Karla G. Ellis, Project Manager, U.S. Army Corps of Engineers at (503) 808-4377.

**Authority:** This permit will be issued or denied under the following:

Section 10, Rivers and Harbors Act 1899 (33 U.S.C. 403), for work in or affecting navigable waters of the United States.

Section 404, Clean Water Act (33 U.S.C. 1344), for discharge of dredged or fill material into waters of the United States.

**Water Quality Certification:** A permit for the described work will not be issued until certification, as required under Section 401 of the Clean Water Act (P.L. 95-217), has been received or is waived from the certifying state. Attached is the state's notice advertising the request for certification.

**Section 404(b)(1) Evaluation:** The impact of the activity on the public interest will be evaluated in accordance with the Environmental Protection Agency guidelines pursuant to Section 404(b)(1) of the Clean Water Act.

**Coastal Zone Management Act Certification:** A permit for the described work will not be issued until the state has concurred with the applicant's certification that the described activity affecting land or water uses in the Coastal Zone complies with the State Coastal Zone Management Program. Section 307(c)(3) of the Coastal Zone Management Act of 1972, as amended by 16 U.S.C. 1456(c)(3) requires the applicant to provide a Certification of Consistency statement. If the state fails to concur or object to the certification statement within six months, state concurrence shall be conclusively presumed. Attached to this Public Notice is a notice of application for Certification of Consistency with the State's Coastal Zone Management Program.

**Public Hearing:** Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

**Endangered Species:** Preliminary determinations indicate that the proposed activity may affect an endangered or threatened species or its critical habitat. Consultation under Section 7 of the Endangered Species Act of 1973 (87 Stat. 844) will be initiated.

**NOTE:** Federal Energy Regulatory Commission (FERC) is the lead Federal agency for this project and will be conducting ESA-consultation.

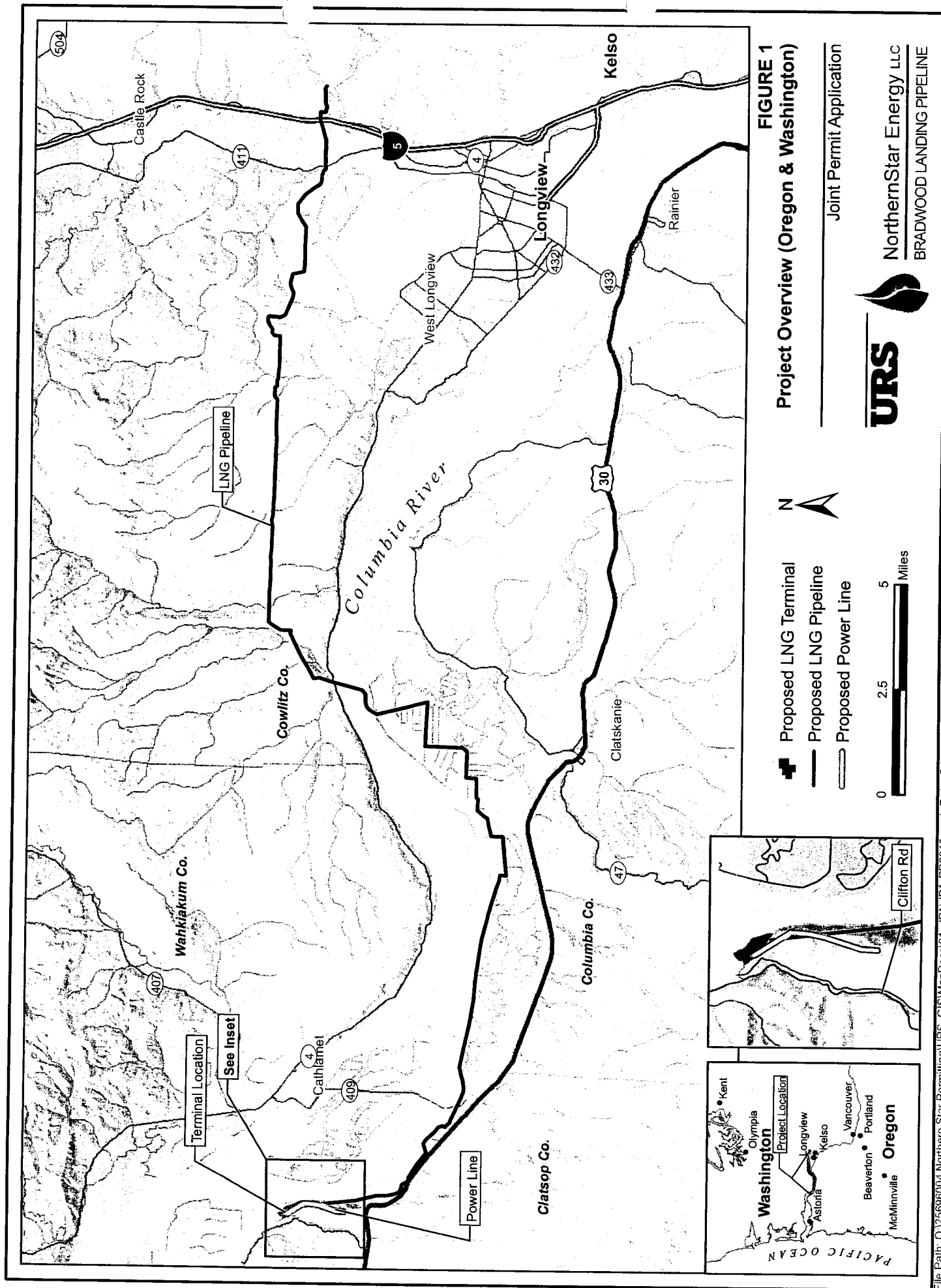
**Cultural Resources:** The described may impact property registered or eligible for registration in the latest published version of the National Register of Historic Places. This notice has been provided to the State Historic Preservation Office and interested Tribes for comment.

**Evaluation:** The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the described activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the described activity, must be balanced against its reasonably foreseeable detriments. All factors, which may be relevant to the described activity will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water

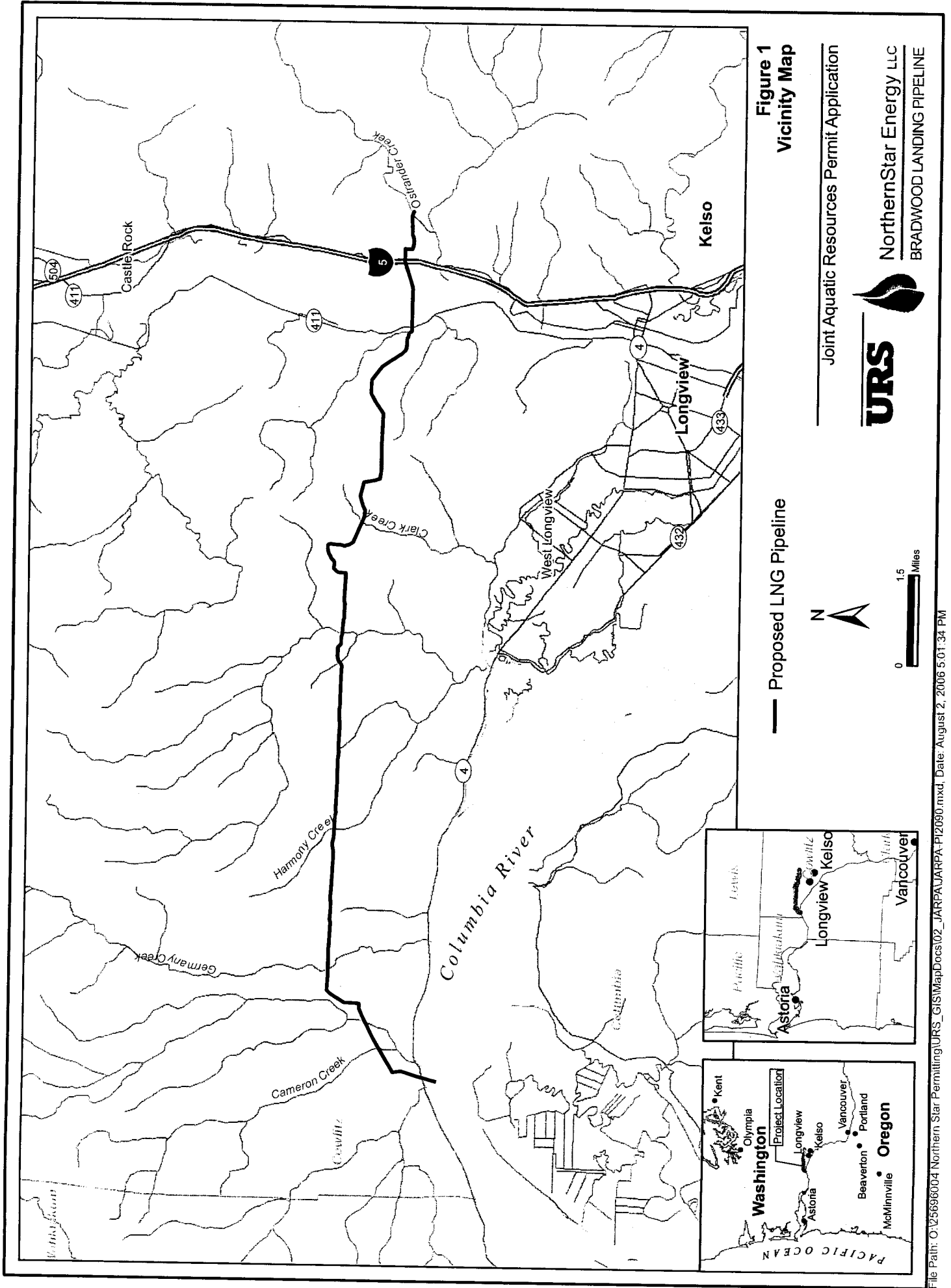
quality, energy needs, safety, food and fiber production, mineral needs, consideration of property ownership and, in general, the needs and welfare of the people.

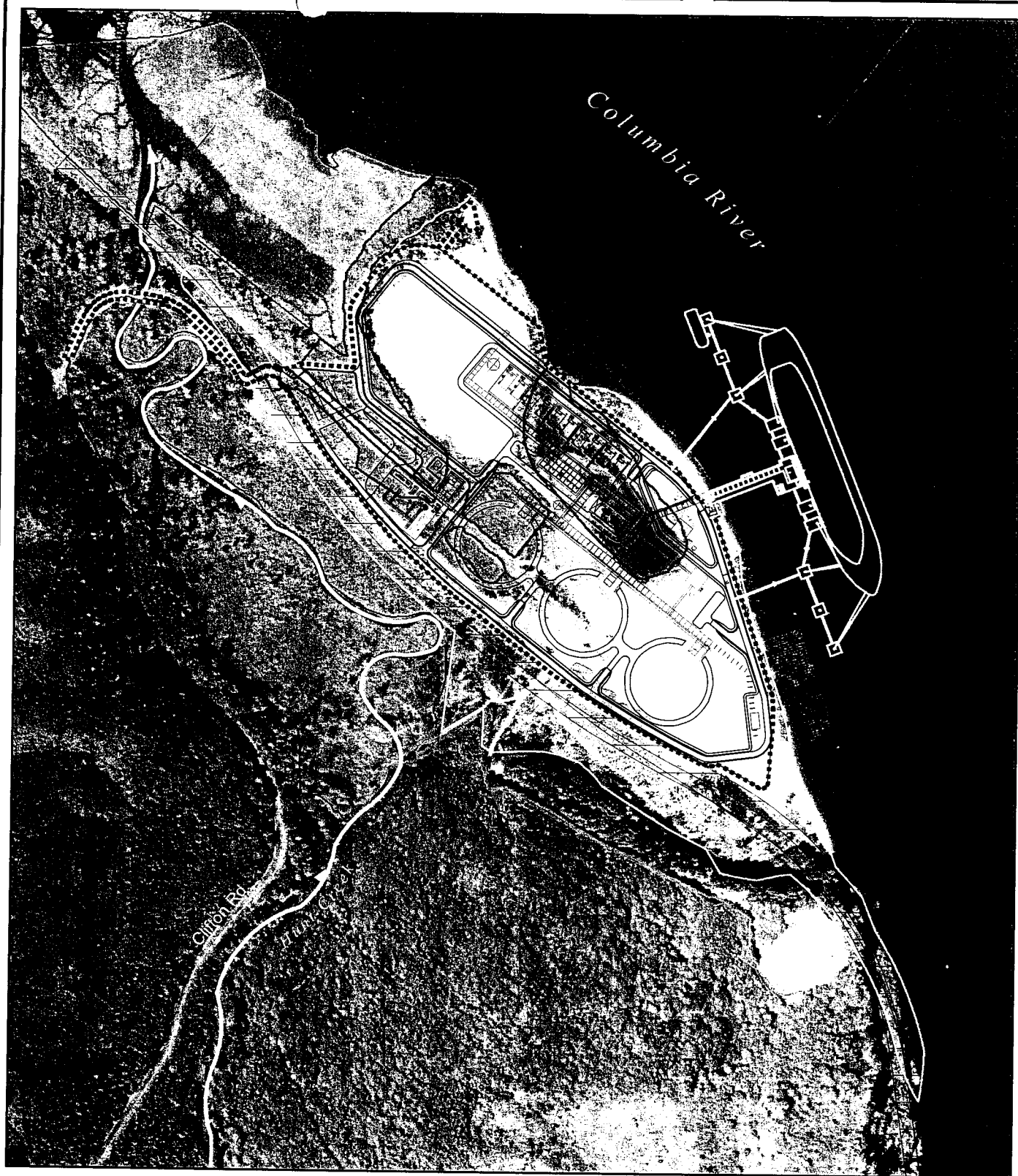
The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

**Additional Requirements:** State law requires that leases, easements, or permits be obtained for certain works or activity in the described waters. These State requirements must be met, where applicable, and a Department of the Army permit must be obtained before any work within the applicable Statutory Authority, previously indicated, may be accomplished. Other local governmental agencies may also have ordinances or requirements, which must be satisfied before the work is accomplished.






NWP-2005-399







#### Wetlands

-  REC Defined Wetlands
-  URS Defined Wetlands
-  CREST Defined Wetlands

#### Site Areas

-  Terminal Construction Area
-  Terminal

Note:  
 1 - 2005 Aerial Photos from WRC.  
 2 - Wetlands from URS, REC, CREST.

**FIGURE 2a**  
**Terminal Wetland/Waterway Impacts**

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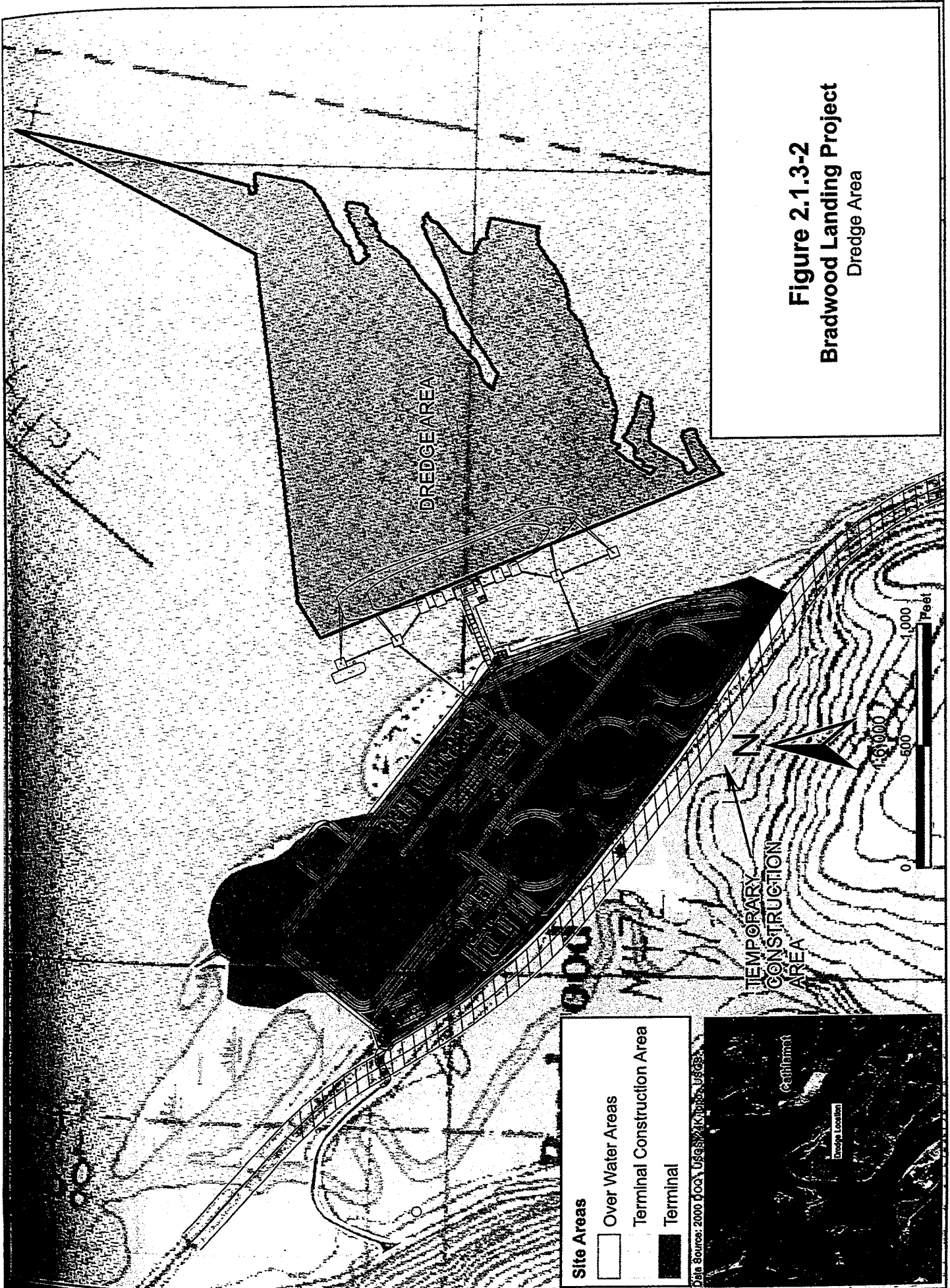
**URS**

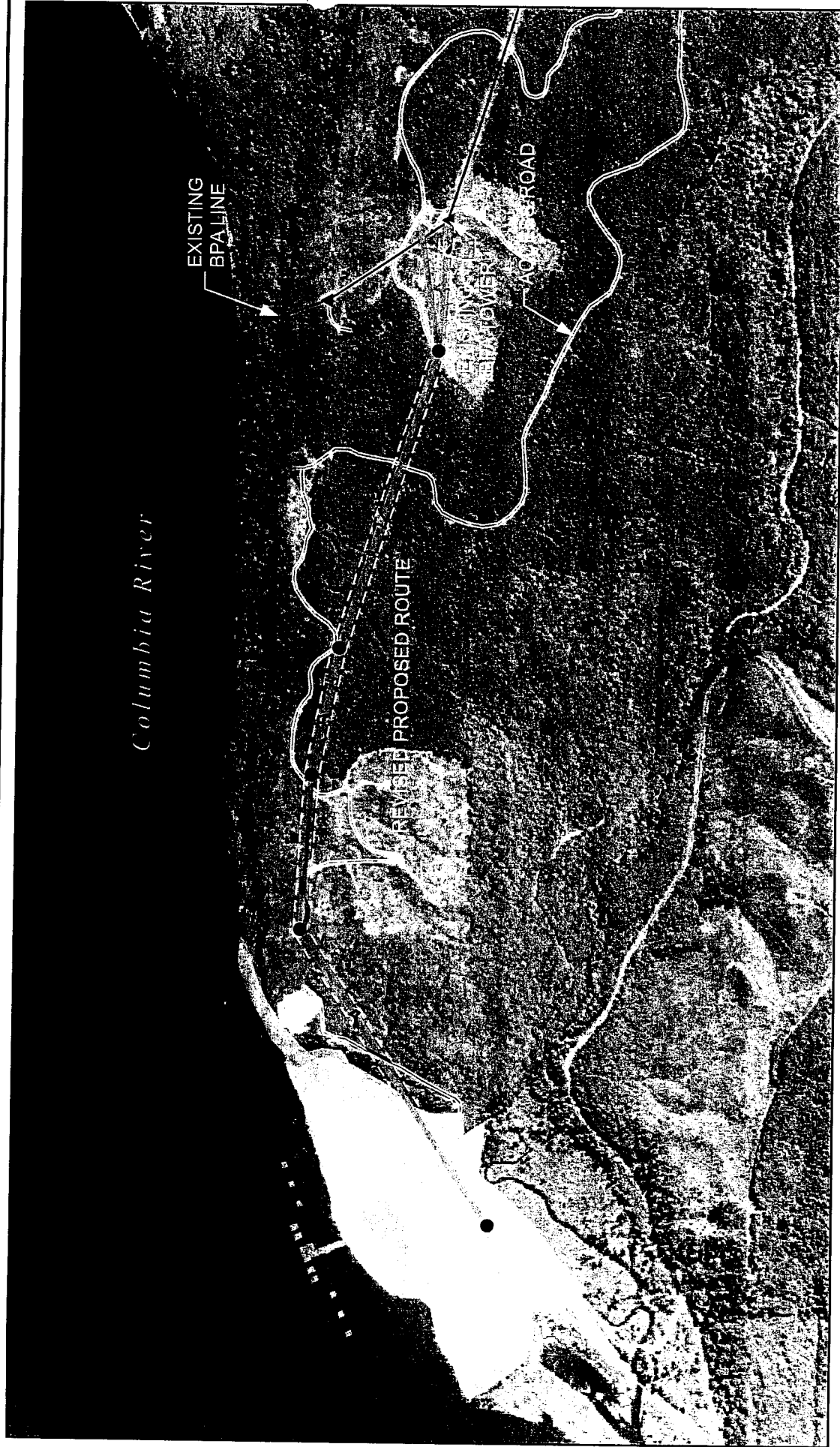


**Bradwood Landing LLC**  
 BRADWOOD LANDING



**Figure 2.1.3-2**  
**Bradwood Landing Project**  
 Dredge Area



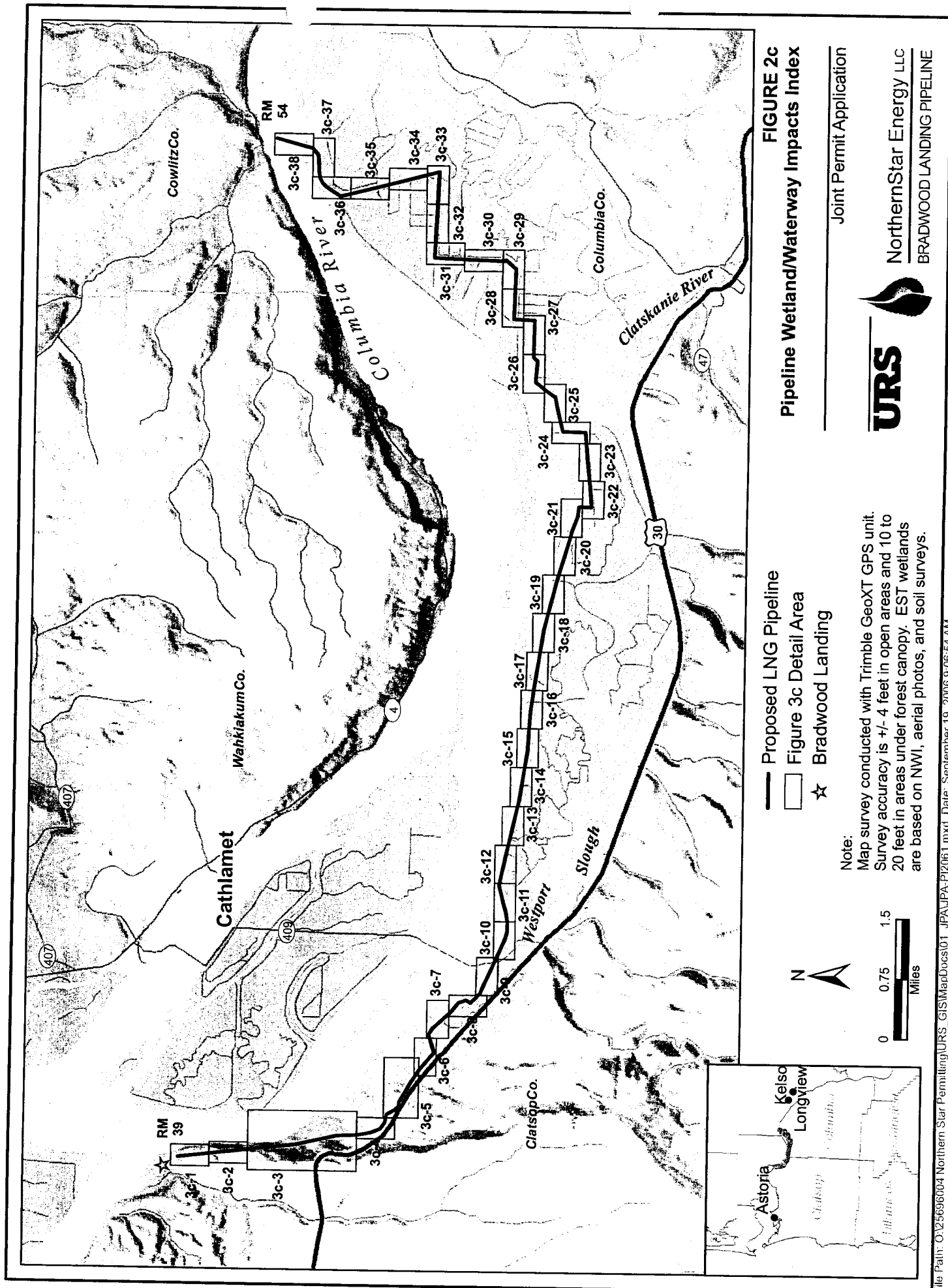


**FIGURE 2b**  
Power Line Wetland/Waterway Impacts

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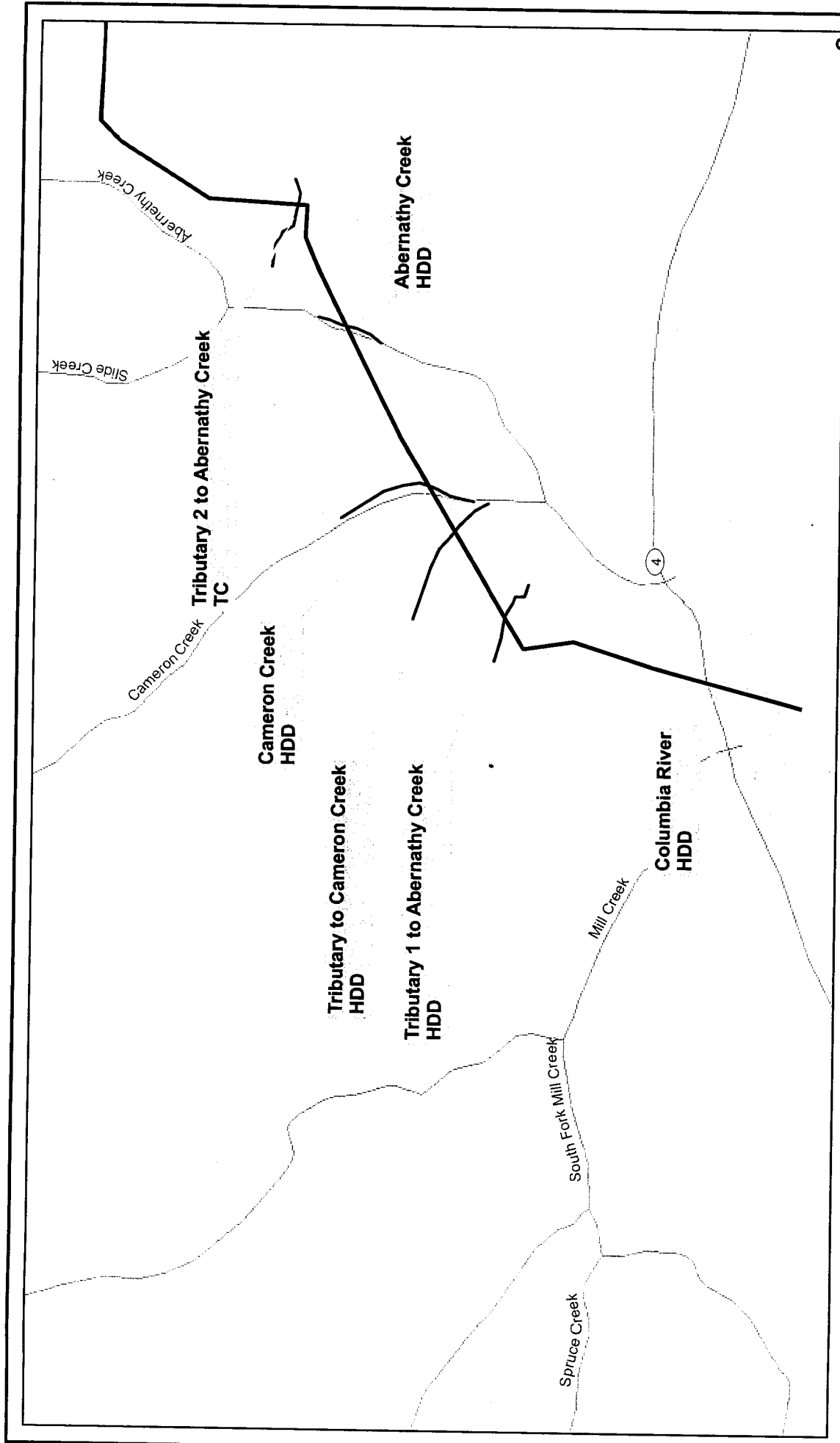
**FIGURE 2c**  
Pipeline Wetland/Waterway Impacts Index

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**URS**

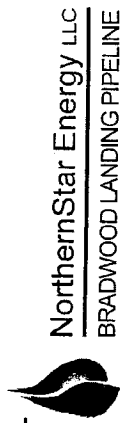
**NorthernStar Energy LLC**  
BRADWOOD LANDING PIPELINE

**Note:**  
Map survey conducted with Trimble GeoXT GPS unit.  
Survey accuracy is +/- 4 feet in open areas and 10 to 20 feet in areas under forest canopy. EST wetlands are based on NWI, aerial photos, and soil surveys.



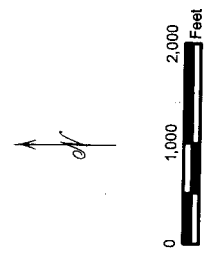
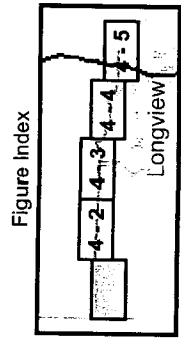
**FIGURE 4-1**  
**Pipeline Waterbody Crossing Sheets**

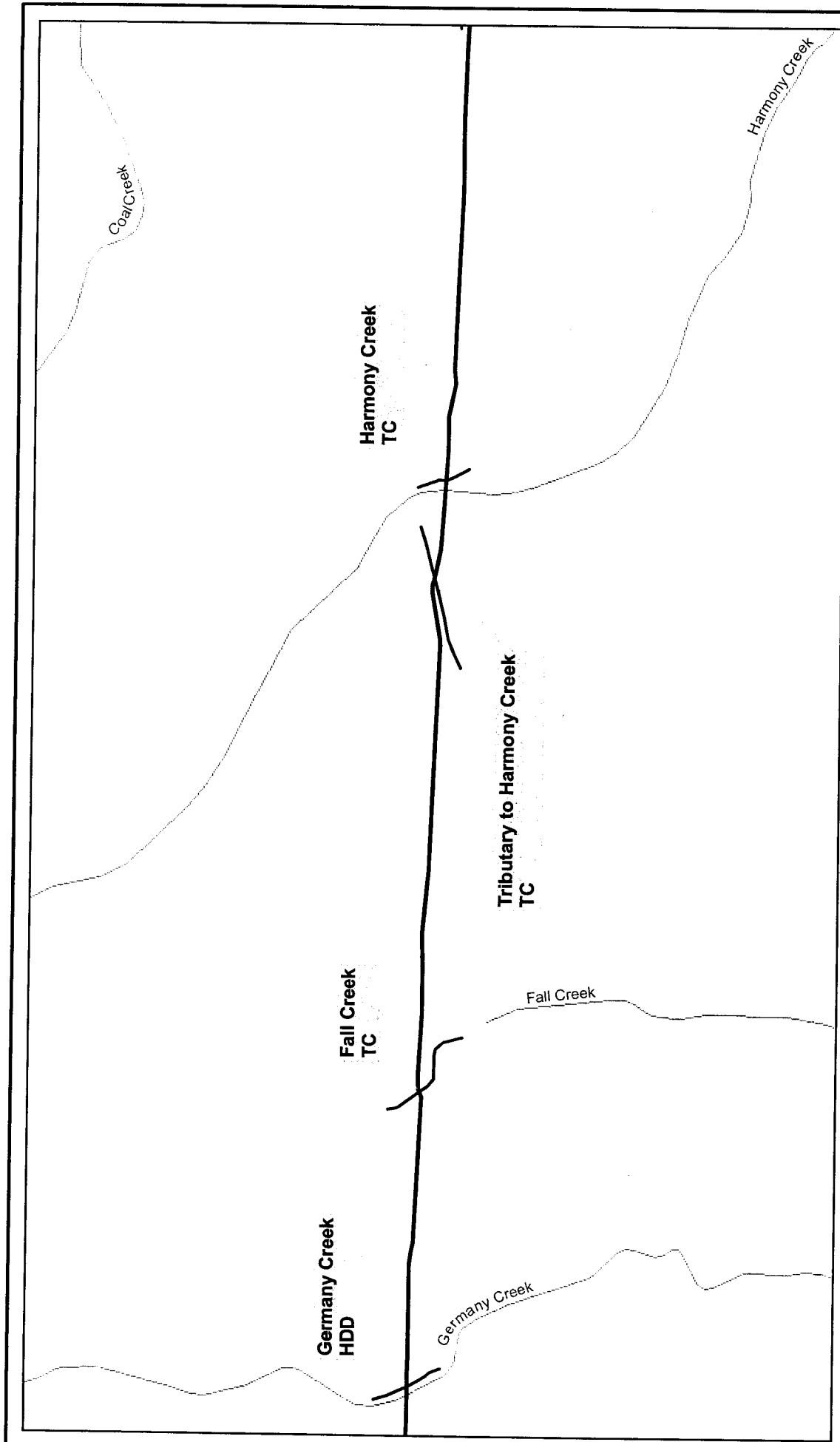
Joint Aquatic Resources Permit Application



Proposed LNG Pipeline  
 Major Waterbody Crossing  
 Study Corridor

Crossing Method  
 TC - Conventional Trench  
 HDD - Bore





**FIGURE 4-2**  
**Pipeline Waterbody Crossing Sheets**

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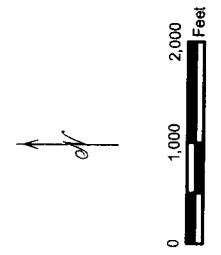
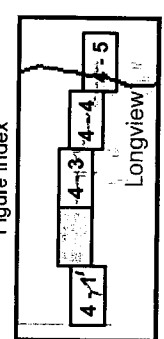
NorthernStar Energy LLC  
BRADWOOD LANDING PIPELINE

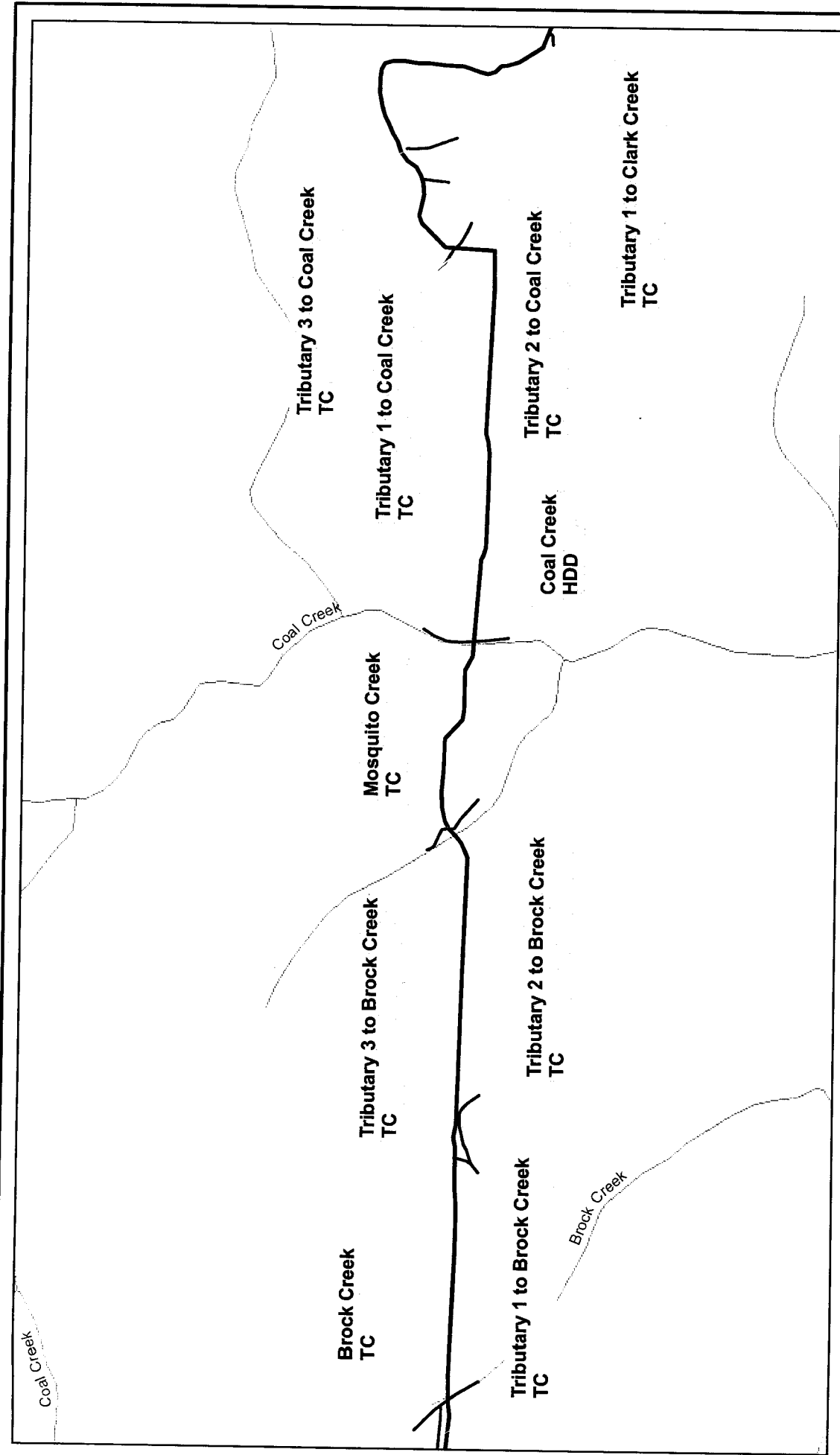
— Proposed LNG Pipeline  
— Major Waterbody Crossing Study Corridor

Crossing Method

TC - Conventional Trench  
HDD - Bore

Figure Index





**FIGURE 4-3**  
**Pipeline Waterbody Crossing Sheets**

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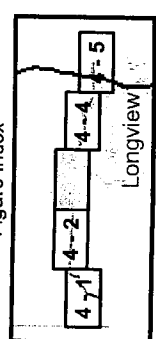
**URS**  **NorthernStar Energy LLC**  
 BRADWOOD LANDING PIPELINE

- Proposed LNG Pipeline
- Major Waterbody Crossing
- Study Corridor

Crossing Method

TC - Conventional Trench  
 HDD - Bore

Figure Index



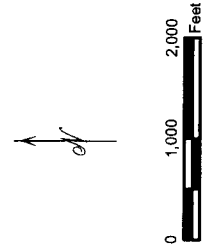
NWP-2005-399

# **FIGURE 4-4** **Pipeline Waterbody Crossing Sheets**

Joint Aquatic Resources Permit Application

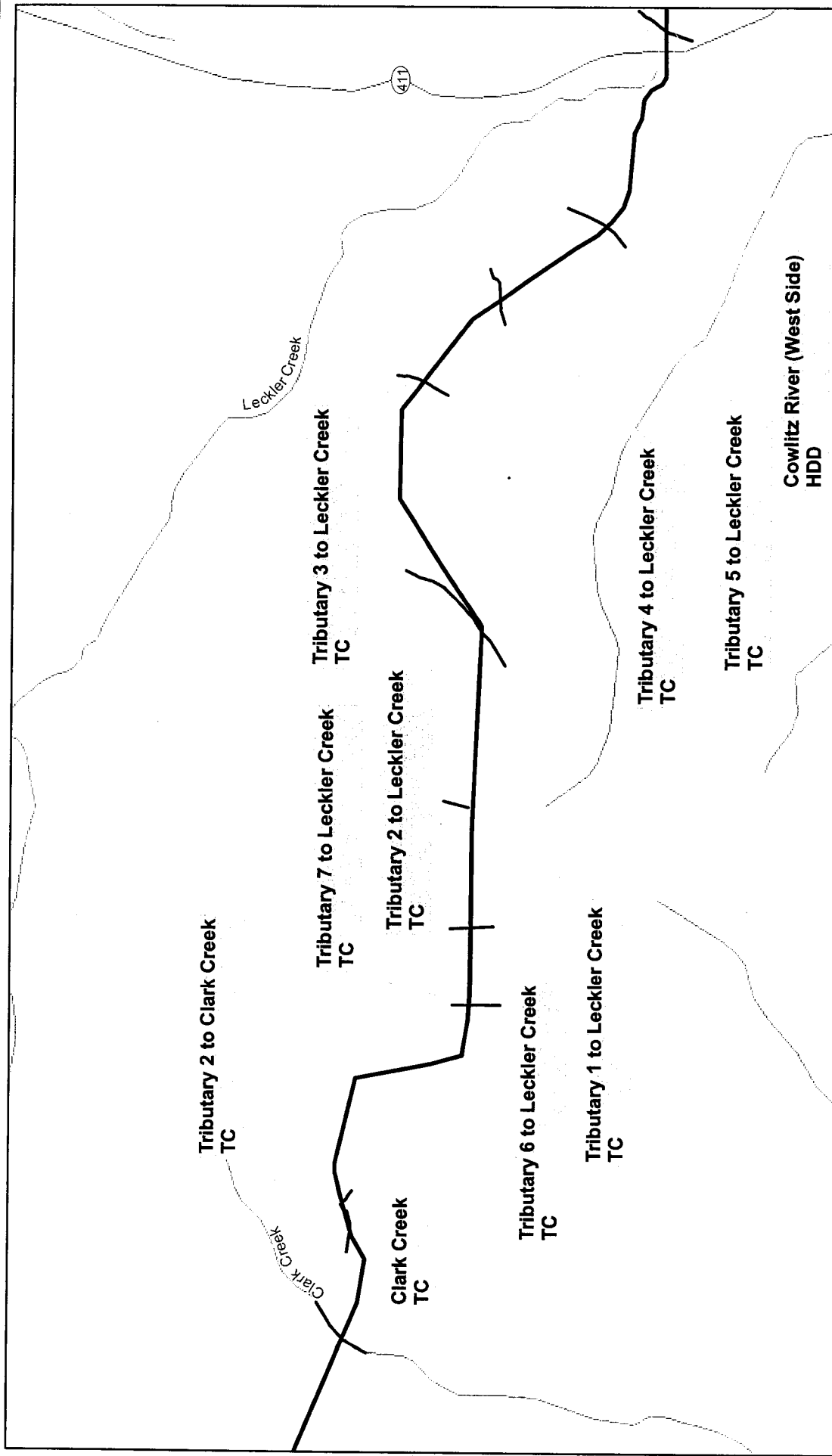
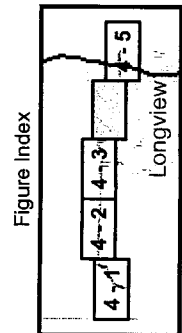


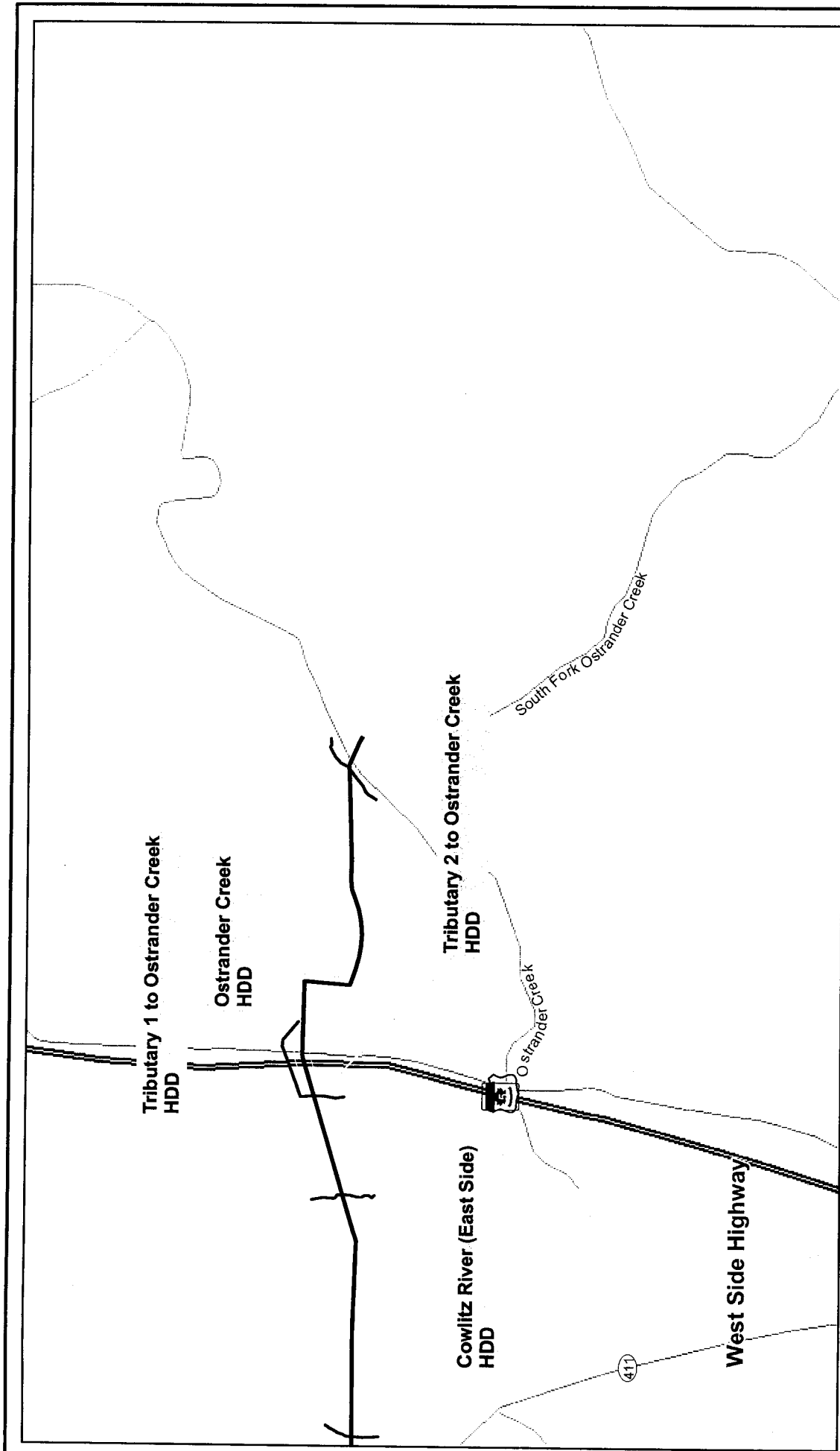
NorthernStar Energy LLC  
BRADWOOD LANDING PIPELINE



— Proposed LNG Pipeline  
— Major Waterbody Crossing  
Study Corridor

Crossing Method  
TC - Conventional Trench  
HDD - Bore





**FIGURE 4-5**  
**Pipeline Waterbody Crossing Sheets**

Joint Aquatic Resources Permit Application

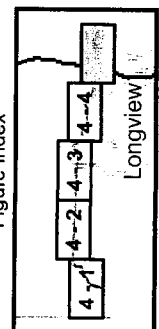


NorthernStar Energy LLC  
 BRADWOOD LANDING PIPELINE

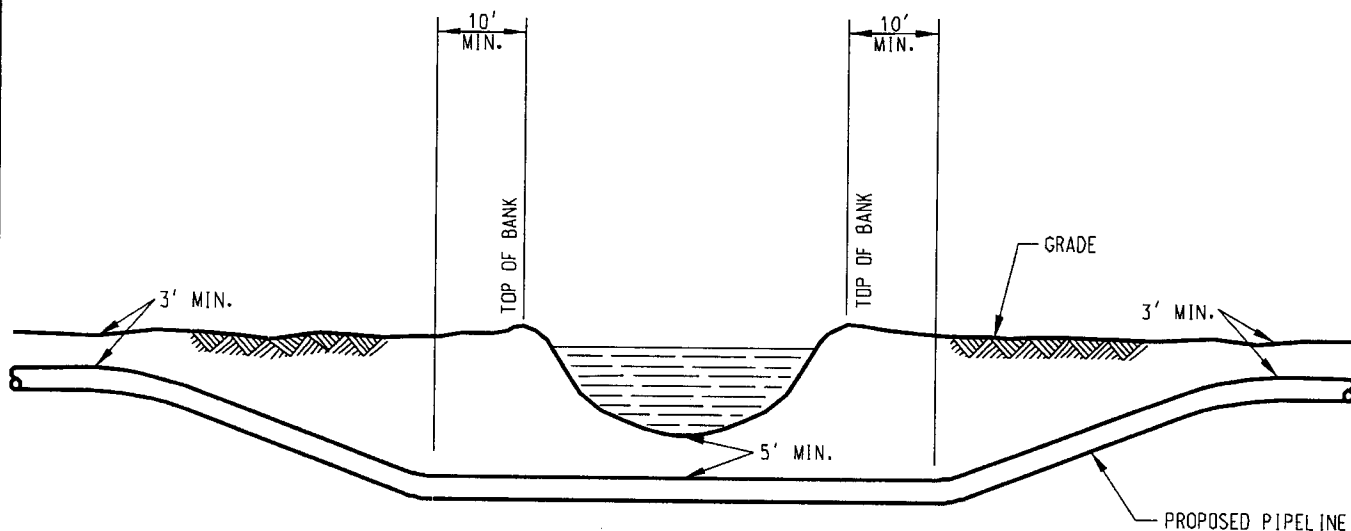
Proposed LNG Pipeline  
 Major Waterbody Crossing  
 Study Corridor

Crossing Method  
 TC - Conventional Trench  
 HDD - Bore

Figure Index







## TYPICAL OPEN CUT WATERBODY CROSSING

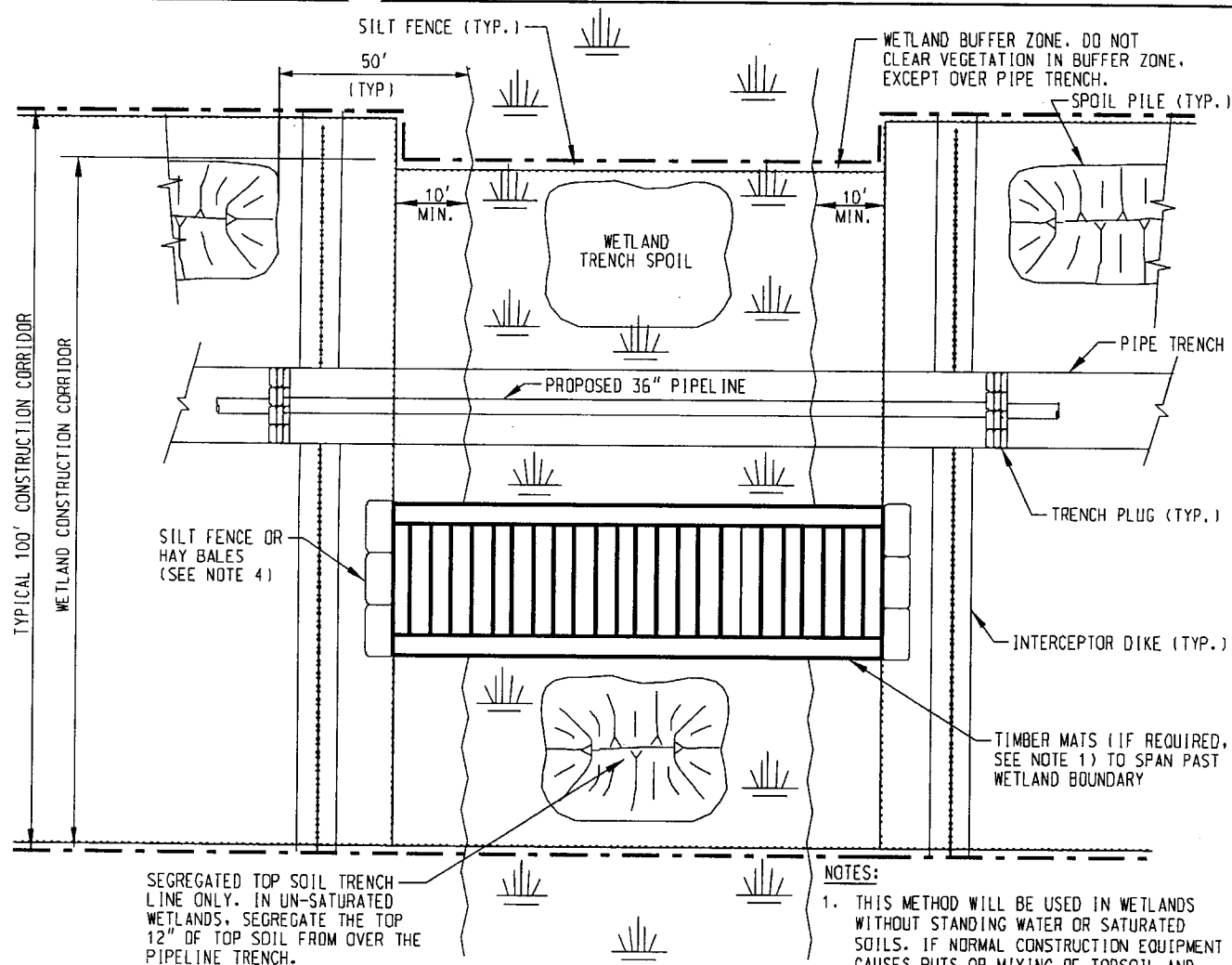
**FIGURE 3-1**  
**Typical Waterbody Crossing**

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**URS**



**NorthernStar Energy LLC**  
**BRADWOOD LANDING PIPELINE**



#### NOTES:

1. THIS METHOD WILL BE USED IN WETLANDS WITHOUT STANDING WATER OR SATURATED SOILS. IF NORMAL CONSTRUCTION EQUIPMENT CAUSES RUTS OR MIXING OF TOPSOIL AND SUBSOIL, LOW-GROUND-PRESSURE EQUIPMENT WILL BE USED, OR NORMAL EQUIPMENT WILL BE OPERATED ON TIMBER MATS.
2. INSTALL PERMANENT INTERCEPTOR DIKES AT THE BASE OF ALL SLOPES ADJACENT TO THE WETLAND.
3. CONTRACTOR SHALL POSTPONE GRADING OF RIGHT-OF-WAY ADJACENT TO WETLAND UNTIL STAGING AREA IS PREPARED AND WORK IN THE WETLAND IS READY TO COMMENCE.
4. SILT FENCE OR HAY BALES SHALL BE PLACED IN THE GAP AT THE TIMBER MATS BY THE END OF EACH DAY OR PRIOR TO APPROACHING RAIN TO PREVENT SEDIMENT FLOW INTO WETLAND.
5. USE ADDITIONAL TIMBER MAT LAYERS TO RAISE CROSSING ABOVE GRADE WHERE POOR SOIL CONDITIONS EXIST.
6. SILT FENCE AND INTERCEPTOR DIKE TO BE REMOVED ACROSS PIPE TRENCH AND DURING CONSTRUCTION OF PIPELINE. SILT FENCE AND INTERCEPTOR DIKE TO BE REPLACED AFTER BACKFILL OF TRENCH.

WETLAND WORK CORRIDOR TABLE			
WETLAND LENGTH	CONSTRUCTION CORRIDOR	WORKING SIDE	SPOIL SIDE
LESS THAN 100' LONG	85'	50'	35'
GREATER THAN 100' LONG	100'	65'	35'

## WETLAND CROSSING WITH TOPSOIL SEGREGATION

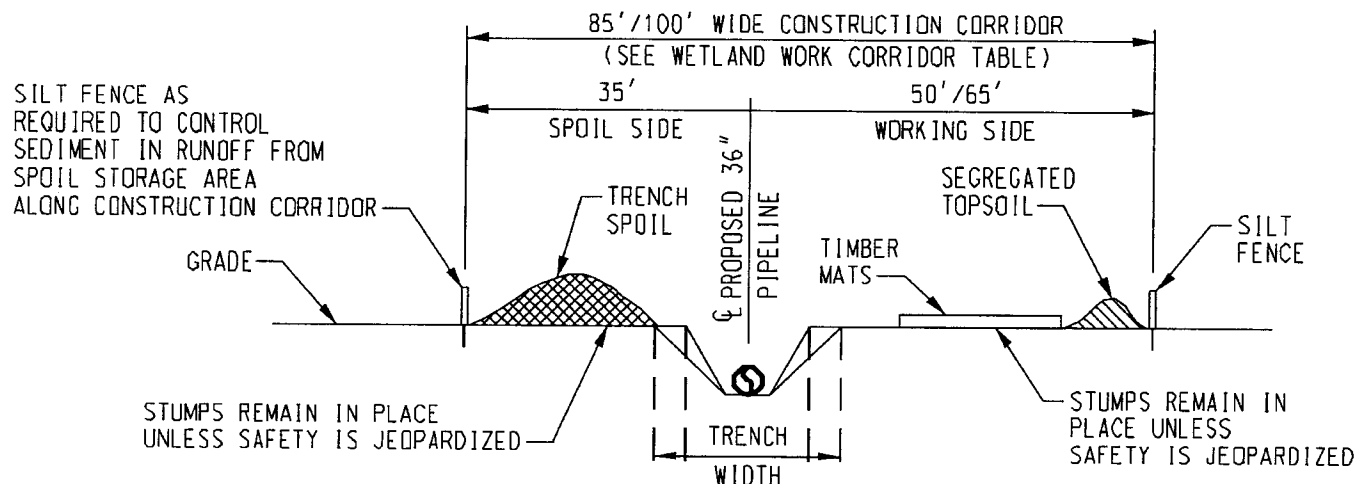
**FIGURE 3-2**  
**Wetland with Topsoil Segregation**  
**(Sheet 1 of 2)**

Joint Permit Application

**URS**

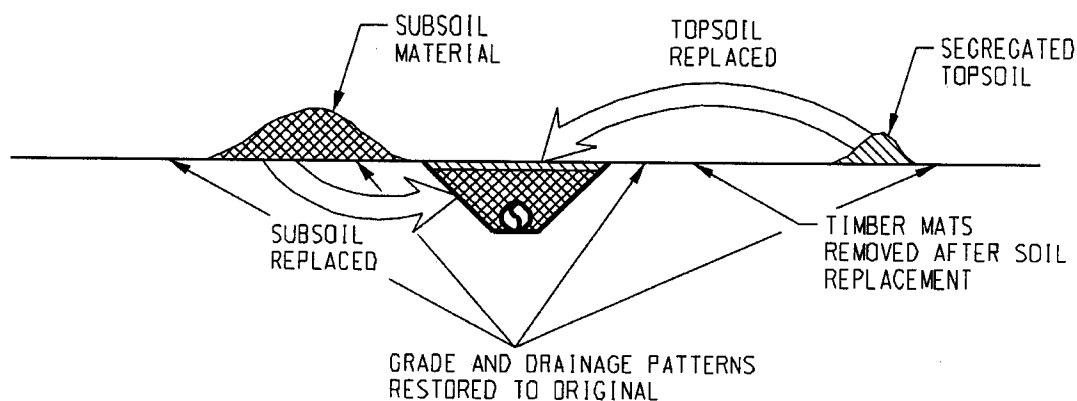


**NorthernStar Energy LLC**  
**BRADWOOD LANDING PIPELINE**



TRENCH WIDTH VARIES BETWEEN  
15' TO 25' DEPENDING ON SOILS  
ENCOUNTERED DURING CONSTRUCTION

## CROSS SECTION



## WETLAND RESTORATION

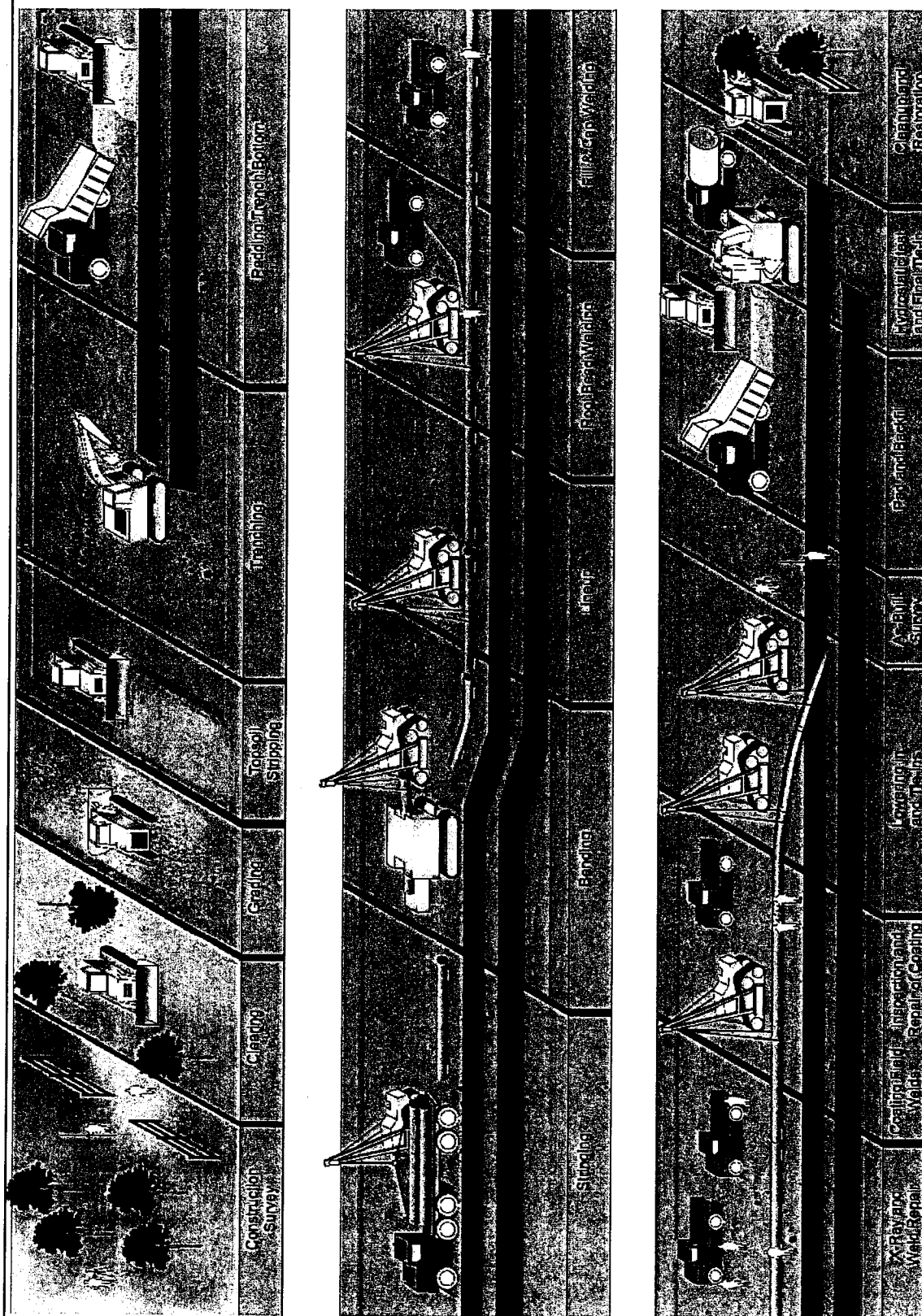
**FIGURE 3-3**  
**Wetland with Topsoil Segregation**  
(Sheet 2 of 2)

Joint Permit Application

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**NorthernStar Energy LLC**  
BRADWOOD LANDING PIPELINE



**FIGURE 3-4**  
**Typical Pipeline Construction Sequence**  
 Joint Permit Application



NorthernStar Energy LLC  
 BRADWOOD LANDING PIPELINE

PUBLIC NOTICE  
Oregon Department of Environmental Quality  
Water Quality 401 Certification

Corps of Engineers Action ID Number: NWP-2005-399  
Oregon Department of State Lands Number: N/A

Notice Issued: October 18, 2007  
Written Comments Due: November 19, 2007

**WHO IS THE APPLICANT:** Bradwood Landing and Northern Star Energy LLC

**LOCATION OF CERTIFICATION ACTIVITY:** See attached U.S. Army Corps of Engineers public notice

**WHAT IS PROPOSED:** See attached U.S. Army Corps of Engineers public notice on the proposed project

**NEED FOR CERTIFICATION:** Section 401 of the Federal Clean Water Act requires applicants for Federal permits or licenses to provide the Federal agency a water quality certification from the State of Oregon if the proposed activity may result in a discharge to surface waters.

**DESCRIPTION OF DISCHARGES:** See attached U.S. Army Corps of Engineers public notice on the proposed project

**WHERE TO FIND DOCUMENTS:** Documents and related material are available for examination and copying at Oregon Department of Environmental Quality, 401 Water Quality Certification Coordinator, Northwest Region, 2020 S.W. 4th Avenue, Portland, Oregon 97201-4953.

While not required, scheduling an appointment will ensure documents are readily accessible during your visit. To schedule an appointment please call Jan Coomler at (503) 229-5087.

Any questions on the proposed certification may be addressed to the 401 Program Coordinator at (503) 229-6030 or toll free within Oregon at (800) 452-4011. People with hearing impairments may call DEQ's TTY at (503) 229-6993.

**PUBLIC PARTICIPATION:**

**Public Hearing:** Oregon Administrative Rule (OAR) 340-48-0020 (6) states that "The Director shall provide an opportunity for the applicant, any affected state, or any interested agency, person, or group of persons to request or petition for a public hearing with respect to certification applications. If the Director determines that new information may be produced thereby, a public hearing will be held prior to the Director's final determination. Instances of doubt shall be resolved in favor of holding the hearing. There shall be public notice of such a hearing."

**Written comments:**

Written comments on the proposed certification must be received at the Oregon Department of Environmental Quality by 5 p.m. on (full date). Written comments should be mailed to Oregon Department of Environmental Quality, Attn: 401 Program Coordinator, 2020 S.W. 4th Avenue, Portland, Oregon 97201. ***People wishing to send written comments via e-mail should be aware that if there is a delay between servers or if a server is not functioning properly, e-mails may not be received prior to the close of the public comment period.*** People wishing to send comments via e-mail should send them in Microsoft Word (through version 7.0), WordPerfect (through version 6.x) or plain text format to [401publiccomments@deq.state.or.us](mailto:401publiccomments@deq.state.or.us). Otherwise, due to conversion difficulties, DEQ recommends that comments be sent in hard copy.

**WHAT HAPPENS NEXT:** DEQ will review and consider all comments received during the public comment period. Following this review, the permit may be issued as proposed, modified, or denied. You will be notified of DEQ's final decision if you present either oral or written comments during the comment period. Otherwise, if you wish to receive notification, please call or write DEQ at the above address.

**ACCESSIBILITY INFORMATION:** This publication is available in alternate format (e.g. large print, Braille) upon request. Please contact DEQ Office of Communications and Outreach at (503) 229-5317 or toll free within Oregon at 1-800-452-4011 to request an alternate format. People with a hearing impairment can receive help by calling DEQ's TTY at (503) 229-6993.

# **PUBLIC NOTICE**

## **OREGON COASTAL MANAGEMENT PROGRAM**

### **CONSISTENCY CERTIFICATION**

Date: October 18 , 2007

Corps of Engineers Action ID Number: NWP-2005-399

Oregon Department of State Lands Number: N/A

#### **Notification**

For projects subject to coastal zone review, notice is hereby given that the project is being reviewed by the Department of Land Conservation and Development (DLCD) as provided in Section 307(c) of the Coastal Zone Management Act. The applicant believes that the activities described in the attached materials would comply with and be conducted in a manner consistent with the Oregon Coastal Management Program. Project information can be made available for inspection at DLCD's Salem office.

DLCD is hereby soliciting public comments on the proposed project's consistency with the Oregon Coastal Management Program. Written comments may be submitted to DLCD, 635 Capital St. NE, Suite 200, Salem, OR 97301-2540, attention consistency review specialist. Any comments must be received by DLCD on or before the comment deadline listed in the federal notice. For further information, you may call DLCD at (503) 373-0050, ext. 250.

#### **REVIEW CRITERIA**

Comments should address consistency with the applicable elements of the Oregon Coastal Management Program. These elements include:

- Acknowledged Local Comprehensive Plans & Implementing Ordinances
- Statewide Planning Goals
- Applicable State Authorities (e.g. Removal-Fill Law and Oregon Water Quality Standards)

#### **INCONSISTENT?**

If you believe this project is inconsistent with the Oregon Coastal Management Program, your comments to DLCD should explain why you believe the project is inconsistent and should identify the Oregon Coastal Management Program element(s) in question. You should also describe how the project could be modified, if possible, to make it consistent with the Oregon Coastal Management Program.



State of Washington

DEPARTMENT OF ECOLOGY

P.O. Box 47600 Olympia, Washington 98504-7600  
(360)407-6000 TDD Only (Hearing Impaired) (360)407-6006

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

Notice of Application for  
Water Quality Certification  
And for  
Certification of Consistency with the  
Washington Coastal Zone Management Program

Date: **OCT 18 2007**

Notice is hereby given that a request has been filed with the Department of Ecology, pursuant to the requirement of Section 401 of the federal Clean Water Act of 1977 (PL 95-217), to certify that the project described in the Corps of Engineers Public Notice No. NWP-####-### will comply with applicable provisions of State and Federal water pollution control laws.

Notice is also given that a request has been filed with the Department of Ecology, pursuant to the requirements of Section 307© of the federal Coastal Zone Management Act of 1972 (16 U.S.C. 1451), to certify that the above-referenced project will comply with the Washington State Coastal Zone Management Program and that the project will be conducted in a manner consistent with that Program.

Any person desiring to present views pertaining to the project on either or both (1) compliance with water pollution control laws or (2) the project's compliance or consistency with the Washington State Coastal Zone Management Program may do so by providing written comments within 30 days of the above publication date to:

Federal Permit Coordinator  
Department of Ecology  
P.O. Box 47600  
Olympia, WA 98504-7600

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